

SOUTH ESSEX SEWERAGE DISTRICT
INDUSTRIAL PRETREATMENT
PROGRAM

2021
ANNUAL REPORT
TO THE
U.S. ENVIRONMENTAL PROTECTION AGENCY
AND THE
MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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SECTION ii
INTRODUCTION

This Report is submitted by the South Essex Sewerage District (District) to the United States Environmental Protection Agency and the Massachusetts Department of Environmental Protection, Division of Water Pollution Control Regulatory Branch in accordance with the requirements of Part 1.B.3. of the District's NPDES Permit No. MA 0100501 signed May 5, 2016 (the NPDES permit) and of 40 CFR 403.12 (i). The section headings below generally follow the numbering system set forth in the District's NPDES permit.

SECTION 1 **UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS**

KEY:

- N/ANot Applicable
(1/5)One violation for a particular pollutant out of five tests for that pollutant in the calendar year (Violation/Tests).
....Since the pH violations, if any, are listed in section 2.4 below, the SIU list does not contain pH violations.

1. Company Name: **Walbar Peabody LLC**
Address: 8 Fifth Street
Peabody, MA 01960
Authorized Representative: Mr. Stephen Mahoney, Facility Manager
Telephone: 978-977-6758
Categorical Classification: Subpart A- Metal Finishing Subcategory 40 CFR 433
(New Source)
SIC Code: 3479, 3724
Permit # 40026

- i. Baseline Monitoring Reporting Requirements: N/A
- ii. Compliance Status Reporting Requirements: N/A
- iii. Periodic Monitoring Requirements: Consistent Compliance
- iv. Categorical Limits: Consistent Compliance
- v. Local Limits: Consistent Compliance

2. Company Name: **Walbar Peabody LLC**
Address: 1 Fifth Street
Peabody, MA 01960
Authorized Representative: Mr. Stephen Mahoney, Facility Manager
Telephone: 978-977-6758
Categorical Classification: Subpart A- Metal Finishing Subcategory 40 CFR 433
(New Source)
SIC Code: 3724
Permit # 41045

- i. Baseline Monitoring Reporting Requirements: N/A
- ii. Compliance Status Reporting Requirements: N/A
- iii. Periodic Monitoring Requirements: Consistent Compliance
- iv. Categorical Limits: Inconsistent Compliance
(Cu mg/L daily 2/19,
Cu mg/L monthly 1/12)
- v. Local Limits: Consistent Compliance

UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS
(CONTINUED)

3. Company Name: **Excelitas Technologies Corp.**
Address: 35 Congress Street
Salem, MA 01970
Authorized Representative: Mr. Michael Fanti, EHS
Telephone: 978-745-3200
Categorical Classification: Subpart A- Metal Finishing Subcategory 40 CFR 433
(Existing Source)
SIC Code: 3671, 3677, 3641, and 3829
Permit # 50065

- i. Baseline Monitoring Reporting Requirements: N/A
- ii. Compliance Status Reporting Requirements: N/A
- iii. Periodic Monitoring Requirements: Consistent Compliance
- iv. Categorical Limits: Consistent Compliance
- v. Local Limits: Consistent Compliance

4. Company Name: **Thermal Circuits, Inc.**
Address: One Technology Way
Salem, MA 01970
Authorized Representative: Mr. Anthony A. Klein, President, CEO
Telephone: 978-745-1162
Categorical Classification: Subpart A- Metal Finishing Subcategory 40 CFR 433
(New Source)
SIC Code: 3699
Permit # 50128

- i. Baseline Monitoring Reporting Requirements: N/A
- ii. Compliance Status Reporting Requirements: N/A
- iii. Periodic Monitoring Requirements: Consistent Compliance
- iv. Categorical Limits: Consistent Compliance
- v. Local Limits: Consistent Compliance

UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS
(CONTINUED)

5. Company Name: **TDF Metal Finishing Co., Inc.**
Address: 6 Electronics Avenue
Danvers, MA 01923
Authorized Representative: Mr. Marko Duffy, Managing Director
Telephone: 781 – 223-4292
Categorical Classification: Subpart A- Metal Finishing Subcategory 40 CFR 433
(New Source)
SIC Code: 3471
Permit # 20136

- i. Baseline Monitoring Reporting Requirements: N/A
- ii. Compliance Status Reporting Requirements: N/A
- iii. Periodic Monitoring Requirements: Consistent Compliance
- iv. Categorical Limits: Consistent Compliance
- v. Local Limits: Consistent Compliance

6. Company Name: **Delta Electronics Mfg. Corp.**
Address: 416 Cabot Street
Beverly, MA 01915
Authorized Representative: Mr. Justin Delaney, Director of Operations
Telephone: 978-927-1060
Categorical Classification: Subpart A- Metal Finishing Subcategory 40 CFR 433
(Existing Source)
SIC Code: 3678
Permit # 10040

- i. Baseline Monitoring Reporting Requirements: N/A
- ii. Compliance Status Reporting Requirements: N/A
- iii. Periodic Monitoring Requirements: Consistent Compliance
- iv. Categorical Limits: Inconsistent Compliance
(CN mg/L daily 1/11,
CN mg/L monthly 1/10)
- v. Local Limits: Consistent Compliance

UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS
(CONTINUED)

7. Company Name: **Communications & Power Industries, LLC, Beverly Microwave Division**
Address: 150 Sohler Road
Beverly, MA 01915
Authorized Representative: Mr Jeffrey Schlichte, Facilities Supervisor
Telephone: 978-922-6004
Categorical Classification: Subpart A- Metal Finishing Subcategory 40 CFR 433
(Existing Source)
SIC Code: 3671
Permit # 10047

- i. Baseline Monitoring Reporting Requirements: N/A
- ii. Compliance Status Reporting Requirements: N/A
- iii. Periodic Monitoring Requirements: Consistent Compliance
- iv. Categorical Limits: Consistent Compliance
- v. Local Limits: Consistent Compliance

8. Company Name: **Travel Leather Co., Inc.**
Address: 39 Wallis Street
Peabody, MA 01960
Authorized Representative: Mr. Charles Papuchis, Plant Engineer
Telephone: 978-531-5254
Categorical Classification: Subpart I- Retan-Wet Finish-Splits Subcategory 40 CFR 425
(Existing Source)
SIC Code: 3111
Permit # 40019

- i. Baseline Monitoring Reporting Requirements: N/A
- ii. Compliance Status Reporting Requirements: N/A
- iii. Periodic Monitoring Requirements: Consistent Compliance
- iv. Categorical Limits: Consistent Compliance
- v. Local Limits: Consistent Compliance

UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS
(CONTINUED)

9. Company Name: **GT Crystal Systems, LLC**
Address: 27 Congress Street
Salem, MA 01970
Authorized Representative: Mr. Frank Banacos, Senior Division of Sapphire Operations
Telephone: 978-619-3325
Categorical Classification: Electrical and Electronic Components Point Source Category 40
CFR Part 469 - Subpart B – Electronic Crystal Subcategory
(New Source)
SIC Code: 3679, 3999 and 8731
Permit # 50074

- i. Baseline Monitoring Reporting Requirements: N/A
- ii. Compliance Status Reporting Requirements: N/A
- iii. Periodic Monitoring Requirements: Consistent Compliance
- iv. Categorical Limits: Consistent Compliance
- v. Local Limits: Consistent Compliance

10. Company Name: **Danvers Water Treatment Plant**
Address: Town of Danvers
30 Lake Street
Middleton, MA 01949
Authorized Representative: Mr. Jason McCarthy, Plant Manager
Telephone: 978-774-5054
Categorical Classification: NOT APPLICABLE - Significant by virtue of flow and load
magnitude.
SIC Code: 4941
Permit # 20200

- i. Baseline Monitoring Reporting Requirements: N/A
- ii. Compliance Status Reporting Requirements: N/A
- iii. Periodic Monitoring Requirements: Consistent Compliance
- iv. Categorical Limits: N/A
- v. Local Limits: Consistent Compliance

UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS
(CONTINUED)

11. Company Name: **Footprint Power Salem Harbor Development LP**
Address: 24 Fort Avenue
Salem, MA 01970
Authorized Representative: Mr. Max Grieg, Footprint Power, NAES
Telephone: 978-224-1697
Categorical Classification: Steam Electric Power Generating Subcategory 40 CFR Part 423
(New Source)
SIC Code: 4911
Permit #: 50124
- i. Baseline Monitoring Reporting Requirements: N/A
 - ii. Compliance Status Reporting Requirements: N/A
 - iii. Periodic Monitoring Requirements: Consistent Compliance
 - iv. Categorical Limits: Consistent Compliance
 - v. Local Limits: Consistent Compliance
12. Company Name: **IXYS IC Division (fka Clare, Inc.)**
Address: 78 Cherry Hill Drive
Beverly, MA 01915
Authorized Representative: Mr. Nestore Polce, VP of Semiconductor Operations
Telephone: 978-524-6744
Categorical Classification: Electrical and Electronic Components Point Source Category 40
CFR Part 469 Subpart A- Semiconductor Subcategory
(New Source)
SIC Code: 3674
Permit #: 10084
- i. Baseline Monitoring Reporting Requirements: N/A
 - ii. Compliance Status Reporting Requirements: N/A
 - iii. Periodic Monitoring Requirements: Consistent Compliance
 - iv. Categorical Limits: Consistent Compliance
 - v. Local Limits: Consistent Compliance

UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS
(Continued)

13. Company Name: **Rousselot Peabody, Inc.**
Address: 227 Washington Street
Peabody, MA 01960
Authorized Representative: Mr. Ian Gunniss, Wastewater Treatment Supervisor
Telephone: 978-573-3774
Categorical Classification: NOT APPLICABLE - Significant by virtue of flow and load magnitude.
SIC Code: 2899
Permit #: 40086

- i. Baseline Monitoring Reporting Requirements: N/A
- ii. Compliance Status Reporting Requirements: N/A
- iii. Periodic Monitoring Requirements: Consistent Compliance
- iv. Categorical Limits: N/A
- v. Local Limits: Inconsistent Compliance
(TSS lbs daily 4/362,
TSS lbs monthly 1/12))

14. Company Name: **City of Peabody Sanitary Landfill**
Address: Farm Avenue
Peabody, MA 01960
Authorized Representative: Mr. Robert Labossiere, Director DPS
Telephone: 978-536-7116
Categorical Classification: NOT APPLICABLE - Significant by virtue of flow and load magnitude.
SIC Code: 4953
Permit #: 40044

- i. Baseline Monitoring Reporting Requirements: N/A
- ii. Compliance Status Reporting Requirements: N/A
- iii. Periodic Monitoring Requirements: Consistent Compliance
- iv. Categorical Limits: N/A
- v. Local Limits: Consistent Compliance

UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS
(CONTINUED)

15. Company Name: **Salem and Beverly Water Supply Board**
Address: 50 Arlington Avenue
Beverly, MA 01915
Authorized Representative: Mr. Alan F. Taubert, P.E., Executive Director
Telephone: 978-922-2600
Categorical Classification: NOT APPLICABLE - Significant by virtue of flow and load magnitude.
SIC Code: 4941
Permit #: 10070

- i. Baseline Monitoring Reporting Requirements: N/A
- ii. Compliance Status Reporting Requirements: N/A
- iii. Periodic Monitoring Requirements: Consistent Compliance
- iv. Categorical Limits: N/A
- v. Local Limits: Consistent Compliance

16. Company Name: **Peabody Monofill Associates, Inc.**
Address: 40 Farm Avenue
Peabody, MA 01960
Authorized Representative: Mr. Steve Melloni, Area Residuals Manager
Telephone: 508-291-4409
Categorical Classification: NOT APPLICABLE - Significant by virtue of flow and load magnitude.
SIC Code: 4953
Permit #: 41050

- i. Baseline Monitoring Reporting Requirements: N/A
- ii. Compliance Status Reporting Requirements: N/A
- iii. Periodic Monitoring Requirements: Consistent Compliance
- iv. Categorical Limits: N/A
- v. Local Limits: Consistent Compliance

UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS
(Continued)

17. Company Name: **City of Peabody, Coolidge Avenue WTP**
Address: 50 Coolidge Avenue
Peabody, MA 01960
Authorized Representative: Ms. Sandra Howland, Facility Supervisor
Telephone: 978-807-6491
Categorical Classification: NOT APPLICABLE - Significant by virtue of flow and load magnitude.
SIC Code: 4941
Permit #: 41042

- i. Baseline Monitoring Reporting Requirements: N/A
- ii. Compliance Status Reporting Requirements: N/A
- iii. Periodic Monitoring Requirements: Consistent Compliance
- iv. Categorical Limits: N/A
- v. Local Limits: Consistent Compliance

18. Company Name: **City of Peabody, Winona WTP**
Address: 38 Butternut Avenue
Peabody, MA 01960
Authorized Representative: Mr. Davis Scribner, Water Quality Manager
Telephone: 978-490-0613
Categorical Classification: NOT APPLICABLE - Significant by virtue of flow and load magnitude.
SIC Code: 4941
Permit #: 41031

- i. Baseline Monitoring Reporting Requirements: N/A
- ii. Compliance Status Reporting Requirements: N/A
- iii. Periodic Monitoring Requirements: Consistent Compliance
- iv. Categorical Limits: N/A
- v. Local Limits: Inconsistent Compliance
(Flow gpd monthly 1/12)

UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS
(Continued)

19. Company Name: **Fresh Advantage Foods, Inc.**
Address: 18 Electronics Avenue
Danvers, MA 01923
Authorized Representative: Mr. Nick Katsos, Maintenance & Facility Manager
Telephone: 781-241-3029
Categorical Classification: Meat and Poultry Products Point Source Category 40 CFR Part 432
Subpart G- Sausage and Luncheon Meat Processors (New Source)
SIC Code: 2013
Permit #: 20230

- i. Baseline Monitoring Reporting Requirements: N/A
- ii. Compliance Status Reporting Requirements: N/A
- iii. Periodic Monitoring Requirements: Consistent Compliance
- iv. Categorical Limits: N/A
- v. Local Limits: Consistent Compliance

20. Company Name: **Tropical Products, Inc.**
Address: 220 Highland Avenue
Salem, MA 01970
Authorized Representative: Mr. Ed Berman, President
Telephone: 978-740-5665
Categorical Classification: Soap and Detergent Manufacturing Point Source Category 40 CFR
Part 417 Subpart H – Manufacture of Liquid Soaps Subcategory,
Subpart P – Manufacture of Liquid Detergents Subcategory
(New Source)
SIC Code: 2841, 2844
Permit #: 50138

- i. Baseline Monitoring Reporting Requirements: N/A
- ii. Compliance Status Reporting Requirements: Consistent Compliance
- iii. Periodic Monitoring Requirements: Consistent Compliance
- iv. Categorical Limits: N/A
- v. Local Limits: Inconsistent Compliance
(BOD mg/L Daily 5/13
FOG mg/L Daily 1/10)

UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS
(Continued)

21. Company Name:	<u>DiLuigi Foods</u>	
Address:	41 Popes Lane Danvers, MA 01923	
Authorized Representative:	Ms. Elizabeth Munoz, HR Manager	
Telephone:	978-750-9900	
Categorical Classification:	Meat and Poultry Products Point Source Category 40 CFR Part 432 Subpart G – Sausage and Luncheon Meat Processor (New Source)	
SIC Code:	2013	
Permit #	20240	
i.	Baseline Monitoring Reporting Requirements:	N/A
ii.	Compliance Status Reporting Requirements:	N/A
iii.	Periodic Monitoring Requirements:	Consistent Compliance
iv.	Categorical Limits:	N/A
v.	Local Limits:	Consistent Compliance

1.1 Changes to the List of Significant Industrial Users (SIUs)

The list in Section 1 represents the Significant Industrial Users of the South Essex Sewerage District during calendar year 2021. The information provided is as required by Attachment D, Item 1, of the District's NPDES permit.

The list is identical to last year's list.

1.2 Applicable Limits

The determination of which limits (local vs. categorical) apply to each industry is made in accordance with the following:

1.2.1 Metal finishing industries (Walbar Peabody, LLC - 8 and 1 Fifth Street; Excelitas Technologies Corp.; Thermal Circuits, Inc.; Delta Electronics Mfg. Co.; Communications & Power Industries, Inc., Beverly Microwave Division and TDF Metal Finishing Co., Inc.) have daily local limits for total suspended solids, fats oils & grease (FOG), biochemical oxygen demand (BOD) and flow and categorical daily limits for cadmium, chromium, copper, lead, nickel, zinc, cyanide, silver and total toxic organics.

1.2.2 Leather industries (Travel Leather Co., Inc.) have local limits for all pollutants except categorical limits for daily chromium and upper pH.

- 1.2.3 Electrical and Electronic Components industries (IXYS IC Division) have local limits for all pollutants except a categorical limit for total toxic organics.
- 1.2.4 Meat and Poultry industries have local limits for all pollutants.
- 1.2.5 Soap and Detergent Manufacturing industry has local limits for all pollutants.
- 1.2.6 Steam Electric Power Generation industry has local limits for all pollutants.
- 1.2.7 Categorical industries that discharge less than 100gpd of industrial wastewater to the sewer (GT Crystal Systems) are determined to be Non-Significant Categorical Industrial Users. These industries are required to submit an annual certification statement in lieu of testing.
- 1.2.8 Industries that are not categorical have local limits.
- 1.2.9 Biochemical oxygen demand (BOD), fats oils & grease (FOG), total suspended solid (TSS) and flow limits are all local limits.

SECTION 2 A SUMMARY OF COMPLIANCE AND ENFORCEMENT ACTIVITIES DURING 2021

2.1 SIU Inspections for 2021

#	Industry Name	Address			Permit		Last Inspection
		#	Street	City/Town	Class	#	Date
1	Walbar Peabody, LLC (40026)	8	Fifth Street	Peabody	2	40026	12/13/21
2	Walbar Peabody, LLC (41045)	1	Fifth Street	Peabody	2	41045	12/13/21
3	Excelitas Technologies, Inc.	35	Congress Street	Salem	2	50064	11/05/21
4	Thermal Circuits, Inc.	1	Technology Way	Salem	2	50128	02/18/21
5	TDF Metal Finishing	6	Electronics Ave	Danvers	2	20136	05/06/21
6	Delta Electronics Mfg., Co., Inc.	416	Cabot Street	Beverly	2	10040	01/20/21
7	Communications & Power Industries, Inc.	150	Sohier Road	Beverly	2	10047	03/26/21
8	Travel Leather Co., Inc.	39	Wallis Street	Peabody	2	40019	09/30/21
9	GT Crystal Systems, Inc.	27	Congress Street	Salem	2	50074	07/23/21
10	Danvers Water Treatment Plant	30	Lake Street	Middleton	2	20200	11/19/21
11	Footprint Power Salem Harbor Operations, LLC	24	Fort Avenue	Salem	2	50137	10/29/21
12	IXYS IC Division (fka Clare, Inc.)	78	Cherry Hill Drive	Beverly	2	10084	06/24/21
13	Rousselot Peabody, Inc.	227	Washington St.	Peabody	2	40086	04/30/21
14	City of Peabody - Sanitary Landfill		Farm Avenue	Peabody	2	40044	05/25/21
15	Salem & Beverly Water Supply Board	50	Arlington Avenue	Beverly	2	10070	11/10/21
16	Peabody Monofill Associates		Farm Avenue	Peabody	2	41050	06/25/21
17	Coolidge Avenue WTP	50	Coolidge Avenue	Peabody	2	41042	04/26/21
18	Winona Water Treatment Plant	38	Butternut Avenue	Peabody	2	41031	05/07/21
19	Fresh Advantage Foods	18	Electronics Avenue	Danvers	2	20230	12/01/21
20	Tropical Products, Inc.	220	Highland Avenue	Salem	2	50138	03/23/21
21	DiLuigi Foods	41	Popes Lane	Danvers	2	20240	09/07/21

2.2 INDUSTRIES SAMPLED BY SEDS DURING 2021

Class	Company Name	City	SESD Sampling Events				
			Start	End	Start	End	Days
1	Axcelis Technologies, Inc.	Beverly	02/09/21	02/10/21	10/25/21	10/27/21	4
2	Communications & Power Industries, Inc.	Beverly	03/09/21	03/11/21	8/31/21	09/02/21	4
2	Coolidge Ave. WTP	Peabody	05/10/21	05/12/21	10/18/21	10/20/21	4
2	Danvers Water Treatment Plant*	Middleton	04/20/21	04/21/21	11/04/21	11/04/21	3
2	Delta Electronics Mfg., Co., Inc.	Beverly	03/08/21	03/10/21	11/08/21	11/09/21	4
2	Excelitas Technologies Corporation	Salem	02/16/21	02/18/21	09/28/21	09/30/21	4
2	Footprint Power Salem Harbor Operations LLC	Salem	02/16/21	02/18/21	09/13/21	09/15/21	4
2	IXYS IC Division	Beverly	02/08/21	02/10/21	10/25/21	10/27/21	4
2	Peabody Monofill Associates	Peabody	03/02/21	03/04/21	10/05/21	10/07/21	4
2	Peabody Sanitary Landfill	Peabody	04/12/21	04/14/21	10/13/21	10/15/21	4
2	Peabody Sanitary Landfill - North Swamp PS	Peabody	04/12/21	04/14/21	10/13/21	10/15/21	4
2	Rousselot Peabody, Inc.	Peabody	05/11/21	05/14/21	09/21/21	09/24/21	4
2	Salem & Beverly Water Supply Board	Beverly	05/17/21	05/21/21	09/20/21	09/23/21	4
2	TDF Metal Finishing	Danvers	01/25/21	01/27/21	11/29/21	12/01/21	4
2	Thermal Circuits, Inc.	Salem	01/11/21	01/13/21	11/08/21	11/10/21	4
2	Travel Leather Co., Inc.	Peabody	03/02/21	03/04/21	10/05/21	10/07/21	4
2	Walbar Peabody LLC (1 Fifth St)**	Peabody	01/19/21	01/20/21	11/16/21	11/18/21	3
2	Walbar Peabody LLC (8 Fifth St)	Peabody	01/19/21	01/21/21	11/16/21	11/18/21	4
2	Winona WTP***	Peabody	08/23/21	08/25/21			2
2	Fresh Advantage Foods, Inc.	Danvers	05/17/21	05/19/21	10/18/21	10/20/21	4
2	Tropical Products, Inc.	Salem	01/11/21	01/13/21	09/14/21	09/15/21	4
2	DiLuigi Foods	Danvers	01/25/21	01/27/21	11/29/21	12/01/21	4
Total SIU Samples							84

* Danvers WTP performing scheduled a self monitoring event during that week also.

** Walbar Peabody didn't have enough process water flow during the remainder of the week.

*** Winona WTP shutdown for several months for construction/upgrade projects.

2.3 Summary of Compliance Schedules (2021)

No Compliance Schedules were issued in 2021.

2.4 pH Monitoring (2021)

As of December 31, 2021, The District's pH monitoring program has nineteen industries involved. Fourteen (14) of the eighteen (18) industries are required to monitor pH continuously (all are SIU's) and four (4) of the eighteen (18) industries submit monthly pH/flow logs. Each industry that is required to submit a pH strip chart does so on a monthly basis. The data received by the District is reviewed and NOV's are issued if warranted. Generally, the noted excursions are attributable to a malfunction of the monitoring equipment or situations where no flow is occurring. In those circumstances where further investigation shows an actual pH violation, appropriate corrective action is taken in accordance with the Enforcement Response Plan.

2.5 Summary of Written Notices of Violation (2021)

Notices of violation (NOVs) are issued to an industry when a limit in the industry's permit is exceeded. Below is a table of the District's subject SIUs, the number of notices of violation issued and the topic of each violation issued. Certain procedural violations, such as submitting a pH chart late or submitting a report late, were handled by a telephone call. All other infractions were documented with written notification to the industry of concern.

Name of Industry	# of Violations	Violation Issued
Walbar Peabody LLC, 1 Fifth Street	2	(1) Daily Cu, (1) Monthly Cu
Walbar Peabody LLC, 8 Fifth Street		
Excelitas Technologies Corporation		
Thermal Circuits, Inc.	1	(1) pH (procedural)
TDF Metal Finishing Co., Inc.		
Delta Electronics Mfg. Co., Inc.	5	(2) pH (procedural), (1) pH, (1) Daily CN, (1) Monthly CN
DiLuigi Foods	4	(1) pH (procedural), (3) pH
Communications & Power Industries, Inc.	1	(1) pH (procedural)
Axcelis Technologies, Inc.		
Travel Leather Co., Inc.	1	(1) pH
GT Crystal Systems, LLC		
Danvers Water Treatment Plant		
Footprint Power Salem Harbor Development, LP		
IXYS IC Division (fka Clare Inc.)		
Rousselot Peabody, Inc.	3	(2) Daily TSS, (1) Monthly TSS
City of Peabody Sanitary Landfill		
Salem & Beverly Water Supply Board		
Peabody Monofill Associates, Inc.	1	(1) pH (procedural)
City of Peabody, Coolidge Avenue WTP		
City of Peabody, Winona WTP	1	(1) pH (procedural)
Fresh Advantage Foods, Inc.		
Tropical Products, Inc.	6	(1) pH (procedural), (2) pH, (3) Daily BOD

2.6 Summary of Administrative meetings, Administrative Orders, Criminal or Civil Suits Filed and Penalties Collected (2021)

There were no industries that required administrative meetings, orders or penalties in 2021.

SECTION 3 SUMMARY OF SIGNIFICANT NON-COMPLIANCE

Significant noncompliance (SNC) was based on 40 CFR 403.8 (f) (2) (viii). The District evaluated its industries' SNC status quarterly as shown in the following table:

SNC Quarter	Chronic Effluent and TRC Violations 40CFR403.8(f)(2)(vii)(A&B) (six month rolling average)	Reporting Requirements and Other Criteria 40CFR403.8(f)(2)(vii)(C-H)
1st Quarter	October - March	January - March
2nd Quarter	January - June	April - June
3rd Quarter	April - September	July - September
4th Quarter	July - December	October - December

The following is a summary of industries found to be in SNC for CY 2021.

- A. Non-compliance with categorical limits
 - Delta Electronics Manufacturing Company (CN monthly TRC)
416 Cabot Street
Beverly, MA 01915
 - Walbar Peabody, LLC (Cu monthly TRC)
1 Fifth Street
Peabody MA
- B. Non-compliance with local limits
 - Tropical Products, Inc. (BOD daily Chronic
220 Highland Avenue and TRC)
Salem, MA 01970

The following three pages represent a public notice of significant noncompliance as was published on February 10, 2022 covering periods October 1, 2020 to March 31, 2021 (Two Companies); and January 1, 2021 to June 30, 2021 (One Company); and April 1, 2021 to September 30, 2021 (N/A); and July 1, 2021 to December 31, 2021 (N/A).

SOUTH ESSEX SEWERAGE DISTRICT
-----PUBLIC NOTICE-----
LIST OF VIOLATORS

In accordance with the United States Environmental Protection Agency regulations, 40 CFR 403.8 (f) (2) (viii), the South Essex Sewerage District is required to publish, at minimum, annually a list of all companies that are or have been in significant noncompliance (SNC) with federal, state, or local wastewater discharge pretreatment standards or other pretreatment requirements during the previous calendar year.

Significant noncompliance is a violation meeting one or more of the following numbered criteria:

1. Chronic violations of wastewater discharge limits, defined here as those in which 66 percent or more of all of the measurements taken for the same pollutant parameter during a 6-month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement, including instantaneous limits, as defined by 40 CFR 403.3(l);
2. Technical review criteria (TRC) violations, defined here as those in which 33 percent or more of all of the measurements taken for the same pollutant parameter during a 6 month period equal or exceed the product of the numeric Pretreatment Standard or Requirement including instantaneous limits, as defined by 40 CFR 403.3(l) multiplied by the applicable TRC (TRC = 1.4 for BOD, TSS, fats, oil, and grease, and 1.2 for all other pollutants except pH);
3. Any other violation of a Pretreatment Standard or Requirement as defined by 40 CFR 403.3(l) (daily maximum or long-term average, instantaneous limit, or narrative Standard) that the South Essex Sewerage District determines has caused, alone or in combination with other Discharges, Interference or Pass Through (including endangering the health of District personnel or the general public);
4. Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or to the environment or has resulted in the South Essex Sewerage District's exercise of its emergency authority under paragraph (f)(1)(vi)(B) of 40 CFR 403.8 to halt or prevent such a discharge;
5. Failure to meet, within 90 days after the schedule date, a compliance schedule milestone contained in a local control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance;
6. Failure to provide, within 45 days after the due date, required reports such as baseline monitoring reports, 90-day compliance reports, periodic self- monitoring reports (SMR), and reports on compliance with compliance schedules;
7. Failure to accurately report noncompliance;
8. Any other violation or group of violations, which may include a violation of Best Management Practices, which the South Essex Sewerage District determines will adversely affect the operation or implementation of the local Pretreatment program.

SNC is evaluated four times each calendar year, as of the end of March, June, September and December, using at that point discharge data and other information for the previous six month period. For each period a description of the violation and corresponding criteria are indicated below.

Period ending March 31, 2021

Delta Electronics Manufacturing Company	(CN monthly TRC)	2*
Walbar Peabody, LLC	(Cu monthly TRC)	2*

Period ending June 30, 2021

Tropical Products, Inc.	(BOD daily Chronic & TRC) 1*, 2*
-------------------------	----------------------------------

Period ending September 30, 2021

None

Period ending December 31, 2021

None

* Indicates criterion number listed above.

February 10, 2022
David Michelsen, P.E.
Executive Director

SOUTH ESSEX SEWERAGE DISTRICT
-----PUBLIC NOTICE-----
LIST OF VIOLATORS

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Period ending September 30, 2021	
None	

Period ending December 31, 2021	
None	

* Indicates criterion number listed above.

February 10, 2022
David Michelsen, P.E.
Executive Director

SN - 02/10/22

SECTION 4 **NARRATIVE DESCRIPTION OF PROGRAM EFFECTIVENESS**

During the past year, the Monitoring and Enforcement Division has performed all aspects of the approved pretreatment program. In the following paragraphs, the accomplishments of the past year as well as the goals to be achieved for the coming year are summarized.

4.1 Inspections and Permits

During calendar year 2021, 514 inspections were conducted. Inspections consisted of any of the following varieties and the frequency of each are included below:

Type of Inspection	Frequency
A. Renewal/Other	77
B. pH Spot Checks	416
C. Annual	21

Inspections were performed on an as needed basis when an existing permit was scheduled for renewal. This allowed the District to monitor and maintain accurate records of all industries within its borders.

“Other” inspections were a result of the 2021 Industrial User update effort. Phone books and industrial park reviews were used to compile a list of potential industries to investigate. From this list "cold call" inspections were performed. If in the initial inspection it was determined that process wastewater was generated at the site or that more information was needed, the District requested an application be completed and returned. Once the application was received and reviewed a comprehensive inspection would be executed and the decision whether or not to require a permit was made. In addition, a “cold call” inspection was completed on facilities without permits and not visited in more than four years to keep files current.

Industrial pH spot checks were performed monthly on randomly selected industries. As of December 31, 2021, there were fourteen (14) industries with a continuous pH-monitoring requirement in their permit and four (4) industries that must submit monthly pH/flow logs.

All submitted Self-monitoring reports are scrutinized for completeness and industrial compliance with the District’s Sewer Use Regulations. Sampling and testing providers have worked closely with the District to insure complete self-monitoring submittals from the industrial users.

The District continues to permit facilities above and beyond the significant industrial users. As of December 31, 2021, the District had a total of 25 wastewater discharge permits (21 SIU’s and 5 General Permits) and maintained active files on 495 locations.

The District continues to record and monitor septage customers, septage haulers and other non-permitted industries within the District, including large quantity food waste generators. This is to ascertain compliance with the District’s Sewer Use Regulations.

In accordance with *Title 40 Code of Federal Regulations Part 441.50 Effluent Limitations Guidelines and Standards*, correspondences were mailed to all effected dental dischargers in Beverly, Danvers, Marblehead, Peabody and Salem. A One-Time Compliance Report was required from each dental discharger by October 12, 2020. As of December 31, 2020, 100% of the dental dischargers, identified within the District, have completed and submitted the required One-Time Compliance Report.

4.2 Equipment Purchased and Utilized

All existing equipment has been inspected and maintained on a regular basis. Any piece of equipment needing repair was immediately taken out of service until repairs could be made. Repairs were then made and the equipment was placed on “ready” status. The District has started to replace its flow meters and portable samplers. Two new samplers were purchased in 2021.

We continue to sample and test selected collection system locations and industrial wastewater discharges for flashpoint and compliance with the District’s Sewer Use Regulations. This endeavor utilized multiple pieces of the District’s pretreatment equipment and staff.

4.3 Training, Reference Material and Staffing

During 2021, additional reference materials were purchased or received via the internet, to assist the staff in the performance of their duties. Staff members also attended assorted pretreatment workshops and training sessions. The staff member list for the Monitoring & Enforcement Division is as follows:

- Peter Clark Supervisor of Laboratory/Monitoring
- Paris Bruscoe Industrial Pretreatment Inspector
- Richard Tierney Pretreatment Technician
- Pam Geiser Administrative Assistant

The District’s laboratory remains certified by the Commonwealth of Massachusetts, license # M-MA154, for total suspended solids, biochemical oxygen demand, pH and fats oils and grease.

4.4 Proposed changes to the program

See section 10 regarding proposed program changes.

SECTION 5 TESTING OF THE INFLUENT, EFFLUENT AND ADDITIONAL TESTING TO DETECT INTERFERENCE AND PASS-THROUGH

The District performed the following pollutant analytical results and toxicity testing in 2021.

- Influent, effluent and sludge samples were analyzed for metals content quarterly.
- Ammonia, Total Kjeldahl Nitrogen (TKN) and nitrate analyses were performed monthly on the District’s influent and final effluent during calendar year 2021.
- Influent and effluent cyanide samples (three sets of grabs) were collected and analyzed.
- Influent and effluent TTO samples were collected and analyzed.
- TCLP testing was performed quarterly on the District’s sludge.
- NPDES toxicity testing results.

A summary of the results of these analyses can be found in Attachment A. Septage monitoring was not collected in 2021. The District sampled and analyzed wastewater from Metal Finishers for cyanide to assess compliance with pretreatment standards. The results for the Metal Finishers cyanide sampling and testing revealed no violations.

The District's testing program demonstrated permit compliance with the exception of the following permit violations (most of which were associated with high flow conditions or Enterococci sampling and analysis protocols) that occurred during calendar year 2021. A change in Enterococci sample collection procedure and analytical method was made on October 1, 2019 and has helped improve permit compliance.

Date	Test	Result	Limit
January 2, 2021	Enterococci	808 CFU/100ml	276 Colonies/100ml
February 2, 2021	Enterococci	420 CFU/100ml	276 Colonies/100ml
June 9, 2021	Enterococci	400 CFU/100ml	276 Colonies/100ml
July 4-10, 2021 *	Total Suspended Solids	17,359 lbs/day (weekly ave.)	11,150 lbs/day (weekly ave.)
July 11-17, 2021 *	Total Suspended Solids	16,595 lbs/day (weekly ave.)	11,150 lbs/day (weekly ave.)
	Carbonaceous Biochemical Oxygen Demand	11,926 lbs/day (weekly ave.)	9,911 lbs/day (weekly ave.)
July 23, 2021 *	Total Chlorine Residual	0.92 mg/L	0.24 mg/L
July 2021 *	Total Suspended Solids	10,739 lbs/day (monthly ave.)	7,433 lbs/day (monthly ave.)
	Total Suspended Solids (Removal Percentage)	80.6% removal	85% removal
August 2, 2021	Total Chlorine Residual	0.76 mg/L	0.24 mg/L
August 16, 2021	Enterococci	385 CFU/100ml	276 Colonies/100ml
August 22, 2021 *	Enterococci	420 CFU/100ml	276 Colonies/100ml
August 22-28, 2021 *	Total Suspended Solids	55 mg/L (weekly ave.)	45 mg/L (weekly ave.)
	Total Suspended Solids	16,595 lbs/day (weekly ave.)	11,150 lbs/day (weekly ave.)
Aug. 29-Sept. 4, 2021 *	Total Suspended Solids	12,602 lbs/day (weekly ave.)	11,150 lbs/day (weekly ave.)
August 2021 *	Total Suspended Solids	8,000 lbs/day (monthly ave.)	7,433 lbs/day (monthly ave.)
	Total Suspended Solids (Removal Percentage)	83.6% removal	85% removal
September 5, 2021 *	Enterococci	1,110 CFU/100ml	276 Colonies/100ml
September 2021 *	Total Suspended Solids	7,737 lbs/day (monthly ave.)	7,433 lbs/day (monthly ave.)
	Total Suspended Solids (Removal Percentage)	84.1% removal	85% removal
October 24-30, 2021 *	Total Suspended Solids	15,404 lbs/day (weekly ave.)	11,150 lbs/day (weekly ave.)

* Permit Limit Compliance Affected by High Flow/Wet Weather Conditions from Elevated Rainfall Event.

SECTIONS 6, 7, 8, & 9 DESCRIPTION OF INTERFERENCE AND PASS-THROUGH INFORMATION

These sections refer to the requirements set forth in the District's NPDES permit. During calendar year 2021, the District did not experience any identifiable interference or pass through occurrences. Therefore, no additional follow up investigations, monitoring, sewer inspections, evaluations or regulatory actions were performed with respect to interference and pass-through occurrences.

SECTION 10

STATUS OF LOCAL LIMITS

The date of the latest adoption of Local Limits is January 2005. The District received a new NPDES Permit (MA0100501), issued on May 6, 2016. The new Permit went into effect on August 1, 2016.

The District hired Hoyle Tanner Associates to evaluate the current IPP for potential updates. On November 23, 2016, the District submitted to the EPA's Regional Pretreatment Coordinator a "Reassessment of the Technically Based Local Limits (TBLL)" as required in Part I, Paragraph B.1 of the District's above referenced NPDES Permit.

The District has developed proposed revisions to the District's Sewer Use Regulations (SUR) to comply with the requirements of the EPA's 2005 Streamlining Rule, as required in Part I Paragraph B.7 of the new Permit. A submittal of the proposed changes to the District's SUR was submitted by January 30, 2017, as required in the EPA's letter to the District on October 6, 2016.

Hoyle Tanner Associates finalized a review and list of proposed Pretreatment Program changes as required in Part I, Paragraph B.6 of the above referenced NPDES Permit. This was submitted by January 30, 2017 as required by the Permit.

In August 2018 a Sampling and Analysis Plan for the reevaluation of the District's Local Limits was developed by Hoyle Tanner Associates and submitted to the EPA for approval. The Plan was approved by the EPA on August 29, 2018. In September 2018, Eastern Analytical, Inc. was hired to perform a week long sampling event at the plant and in the collection system. The data gathered was utilized to reevaluate the District's Maximum Allowable Headworks Loading (MAHL) and Local Limits.

During 2020, Hoyle Tanner Associates conducted an analysis of data gathered in an evaluation of the District's Maximum Allowable Headworks Loading (MAHL) and Local Limits. Based on the analysis, proposed Maximum Allowable Headworks Loading and proposed Local Limits were developed and summarized in a Local Limits Final Report.

The Local Limits Final Report was submitted to the EPA in August 2021.

SUMMARY

The EPA Region 1 Annual Pretreatment Report Summary Sheet for 2021 is included as Attachment B.

ATTACHMENT A

Section Five (5) Supporting Documentation

1. Metals Testing
2. Ammonia, TKN, Nitrate and CN Testing
3. TCLP Sludge Testing
4. Toxicity Testing

(1)

South Essex Sewerage District Metals Analysis 2021										
INFLUENT										
Composite Analysis						2021(1)	Average(1)	Max(1,2)	Percent of	
Date	1/5/2021	2/17/2021	4/13/2021	7/20/2021	10/13/2021	Max		Allowable	MAHL	
Total Metals (mg/l)	mg/L	mg/L	mg/L	mg/L	mg/L	HL(lbs)	HL(lbs)	MAHL(lbs)	(Average/Allowable)	
Aluminum (Al)			6.07		1.14	1206.87	738.54			
Arsenic (As)	0.0014		0.0017	0.00172		0.51	0.41	5.64	7.3%	
Beryllium (Be)	<0.0001		0.00006	0.00003	<0.001	0.01	0.01			
Cadmium (Cd)	0.0002		0.0002	0.00015	0.0001	0.05	0.04	1.88	2.2%	
Chromium (Cr)	0.0023		0.0061	0.00161	0.008	1.90	1.05	50.10	2.1%	
Copper (Cu)	0.0287		0.0466	0.0341	0.0403	10.18	9.17	48.20	19.0%	
Cyanide (CN)		<0.01	<0.003			0.00	N/A	14.90		
Lead (Pb)	0.0011		0.0019	0.00151		0.45	0.37	22.90	1.6%	
Mercury (Hg)	<0.0002		<0.00009	<0.00009		0.00	N/A	0.50		
Molybdenum (Mo)	0.0017		0.0026	0.00258		0.77	0.58			
Nickel (Ni)	0.0038		0.0054	0.00415	0.0046	1.24	1.11	20.30	5.4%	
Selenium (Se)	0.003		0.0029	0.00282	0.0032	0.84	0.75	7.51	9.9%	
Silver (Ag)	0.0003		0.0003	0.00018		0.08	0.06	20.60	0.3%	
Zinc (Zn)	0.053		0.0727	0.0567	0.068	16.93	15.43	165.00	9.4%	
Note: 1) non-detect values were not used in the calculations.										
2) MAHL - source data from SESD LL Development (2005)										
EFFLUENT										
	M&E Testing					Toxicity testing				
Composite Analysis										
Date	1/5/2021	2/17/2021	4/13/2021	7/20/2021	10/13/2021	2/7/2021	4/4/2021	6/6/2021	8/1/2021	
Total Metals (mg/l)	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
Aluminum (Al)			0.0484		0.055	0.115	0.056	0.09	0.057	
Arsenic (As)	0.0013		0.0012	0.00139						
Beryllium (Be)	<0.0001		<0.00002	<0.00002	<0.001					
Cadmium (Cd)	<0.0001		<0.00003	0.00003	0.0001	<0.005	<0.0001	<0.001	<0.0001	
Chromium (Cr)	0.0005		0.0007	0.00067	0.0009	<0.010	0.001	<0.0048	0.00064	
Copper (Cu)	0.0133		0.0211	0.0107	0.0127	<0.010	0.01	0.0064	0.0044	
Cyanide (CN)		<0.01	<0.003							
Lead (Pb)	0.0004		0.0006	0.00034		<0.01	0.0004	<0.001	0.00037	
Mercury (Hg)	<0.0002		<0.00009	<0.00009						
Molybdenum (Mo)	0.0016		0.0019	0.00246						
Nickel (Ni)	0.0034		0.004	0.00355	0.0039	<0.025	0.002	<0.0063	0.0021	
Selenium (Se)	0.0031		0.0026	0.0026	0.0031					
Silver (Ag)	<0.0001		0.00003	0.00006						
Zinc (Zn)	0.022		0.0238	0.0165	0.015	<0.050	0.027	0.034	0.015	
Total	SUMMARY OF EFFLUENT METALS									
Metals (mg/l)	Number of Analysis		Number Detected	Detected Minimum	Detected Maximum	Detected Average	Chronic Criteria	Chronic Criteria * 18.6:1 dil.	Acute Criteria	Acute Criteria * 18.6:1 dil.
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Aluminum (Al)	6		6	0.0484	0.115	0.0702				
Arsenic (As)	3		3	0.0012	0.00139	0.0013	0.036	0.670	0.069	1.283
Beryllium (Be)	4		0	N/A	N/A					
Cadmium (Cd)	8		2	0.00003	0.0001	0.0001	0.0093	0.173	0.033	0.614
Chromium (Cr)	8		6	0.0005	0.001	0.0007				
Copper (Cu)	8		7	0.0044	0.0211	0.0112	0.0031	0.058	0.0048	0.089
Cyanide (CN)	2		0	N/A	N/A		0.0010	0.019	0.0010	0.019
Lead (Pb)	7		5	0.00034	0.0006	0.0004	0.0056	0.104	0.14	2.604
Mercury (Hg)	3		0	N/A	N/A		0.00094	0.017	0.0018	0.033
Molybdenum (Mo)	3		3	0.0016	0.00246	0.0020				
Nickel (Ni)	8		6	0.002	0.004	0.0032	0.0082	0.153	0.074	1.376
Selenium (Se)	4		4	0.0026	0.0031	0.0029	0.071	1.321	0.29	5.394
Silver (Ag)	3		2	0.00003	0.00006	0.0000			0.0019	0.035
Zinc (Zn)	8		7	0.015	0.034	0.0219	0.081	1.507	0.09	1.674
Note: * New dilution factors for chronic and acute parameters are taken from the District's new NPDES which went into effect on July 4, 2016.										

(2)

South Essex Sewerage District									
Influent / Effluent Ammonia, CN, TKN and Nitrate Results									
Calendar year 2021									
INFLUENT					EFFLUENT				
Date	Ammonia Result mg/l	TKN Result mg/l	Nitrate Result mg/l	Nitrate/Nitrite Result mg/l	Date	Ammonia Result mg/l	TKN Result mg/l	Nitrate Result mg/l	Nitrate/Nitrite Result mg/l
1/5/2021	16.8	27.5	0.57	1.25	1/5/2021	13.9	19.3	1.01	1.70
2/17/2021	15.8	28.2	1.05	1.61	2/17/2021	13.8	17.2	0.81	1.27
3/3/2021	16.9	28.2	0.44	0.91	3/3/2021	15.4	19.0	0.78	1.28
4/13/2021	21.7	36.9	<0.4	<0.5	4/13/2021	21.0	25.1	<0.4	0.31
5/11/2021	16.7	26.2	<0.4	0.47	5/11/2021	14.7	17.6	0.94	1.52
6/22/2021	21.1	36.1	<0.4	<0.5	6/22/2021	18.9	23.9	0.73	1.16
7/20/2021	13.9	22.3	<0.2	<0.3	7/20/2021	11.7	14.4	0.46	0.46
8/16/2021	20.6	31.4	<0.4	0.31	8/16/2021	16.4	19.2	0.48	1.29
9/21/2021	17.4	29.6	0.43	0.43	9/21/2021	14.9	19.8	0.73	2.30
10/13/2021	18.0	32.1	<0.4	<0.5	10/13/2021	16.2	20.7	0.55	0.55
11/2/2021	9.5	17.6	1.19	1.95	11/2/2021	8.4	11.0	1.08	1.60
12/6/2021	23.5	37.9	<0.4	<0.5	12/6/2021	21.1	31.8	0.75	0.75
Average	17.7	29.5	0.74	0.99	Average	15.5	19.9	0.76	1.18
Maximum	23.5	37.9	1.19	1.95	Maximum	21.1	31.8	1.08	2.30
Minimum	9.5	17.6	<0.2	<0.3	Minimum	8.4	11.0	<0.4	0.31
INFLUENT - grab									
Date	2/17/2021	4/13/2021	4/13/2021						
Time	10:20AM	7:10AM	1:50PM						
CN (mg/l)	<0.01	<0.003	<0.003						
EFFLUENT - grab									
Date	2/17/2021	4/13/2021	4/13/2021						
Time	10:30AM	7:15AM	2:00PM						
CN (mg/l)	<0.01	<0.003	<0.003						

(3)

SOUTH ESSEX SEWERAGE DISTRICT							
2021 Sludge Testing Results							
Parameter	Units	1/29/2021	3/24/2021	5/6/2021	8/20/2021	11/9/2021	12/19/2021
Solids Total	Percent	20.8	22.1	21.2	27.2	22.7	18
Solids Total Volatile	Percent	87.7	86	86.8	79	85	94
Total Carbon (est)	Percent	48.7		48.2	43.9		52
Solids Total Fixed	Percent	12.3	14	13.2	21	15	6.5
Chloride	mg/kg	2100		1200	1900		2200
Nitrate/Nitrite-N	mg/kg	<20		<20	<40		<50
Ammonia-N	mg/kg	4900		3700	2300		4500
TKN	mg/kg	59000		49000	32000		60000
Total Nitrogen	mg/kg	59000		49000	32000		60000
pH	SU	6.29	6.2	6.04		5.8	5.77
Paint Filter (Free Liqui	None	Absent	Absent	Absent	Absent	Absent	Absent
Aluminum (Al)	mg/kg	8900	7330	9100	8900	10900	6500
Arsenic (As)	mg/kg	2.5	1.39	3.3	4	4.39	3.3
Barium (Ba)	mg/kg						
Beryllium (Be)	mg/kg	<0.1	<0.63	0.26	0.18	<0.44	0.11
Calcium (Ca)	mg/kg	19000		12000	14000		12000
Cadmium (Cd)	mg/kg	0.93	1.25	1	1.1	1.18	0.53
Chromium (Cr)	mg/kg	80	29.1	26	32	261	36
Copper (Cu)	mg/kg	210	204	210	280	230	220
Iron (Fe)	mg/kg	6000	5990	6900	9600	9320	5300
Lead (Pb)	mg/kg	14	15.2	25	42	25.8	11
Magnesium (Mg)	mg/kg	1700		1600	1500		1900
Manganese (Mn)	mg/kg	110		77	82		170
Mercury (Hg)	mg/kg	0.33	<0.179	0.45	0.51	0.336	0.54
Molybdenum (Mo)	mg/kg	3.3		3.4	6.5		3.7
Nickel (Ni)	mg/kg	7	10.5	7.8	10	6.06	6.3
Phosphorus (P)	mg/kg	16000	12800	12000	11000	16100	15000
Potassium (K)	mg/kg	2200		2100	1200		2800
Selenium (Se)	mg/kg	1.9	<1.27	2.1	2.1	<0.87	1.7
Sodium (Na)	mg/kg	1700		1100	1200		1400
Zinc (Zn)	mg/kg	330	338	320	420	348	350
Silver (TCLP)	mg/L	<0.1	<0.025			<0.025	
Arsenic (TCLP)	mg/L	<0.5	<0.05			<0.05	
Barium (TCLP)	mg/L	<0.5	0.141			0.111	
Cadmium (TCLP)	mg/L	<0.1	<0.025			<0.025	
Chromium (TCLP)	mg/L	<0.1	<0.025			<0.025	
Mercury (TCLP)	mg/L	<0.01	<0.005			<0.001	
Lead (TCLP)	mg/L	<0.5	<0.025			<0.025	
Selenium (TCLP)	mg/L	<0.1	<0.05			<0.05	

(4)

SESD 2021 Toxicity Testing Results

The following summarizes the results of acute and chronic exposure bioassays performed in support of the NPDES biomonitoring requirements of the South Essex Sewerage District, Salem Massachusetts. The new NPDES Permit signed May 5, 2016 requires both Acute and Chronic evaluations. The 48 hour Acute definitive assays were conducted using marine species, *Americamysis bahia* and *Menidia beryllina*. The 7 day Chronic test used the marine species *Menidia beryllina* and the 60 Minute Chronic test used the marine species *Arbacia punctulata*.

Study Number	34879					
Sample Date:	February 2021					
Acute Toxicity Evaluation					Permit	Pass
Species		Exposure	LC-50	A-NOEC	Limit (LC-50)	Yes/No
<i>Americamysis bahia</i>		48 Hour	>100%	NC	≥100%	Yes
<i>Menidia beryllina</i>		48 Hour	>100%	NC	≥100%	Yes
Chronic Toxicity Evaluation					Permit Limit	Pass
Species		Exposure	C-NOEC	IC-25	(C-NOEC)	Yes/No
<i>Menidia beryllina</i>		7 Days	100%	>100%	Report	NA
<i>Arbacia punctulata</i>		60 Minutes	100%	>100%	Report	NA
Study Number	34986					
Sample Date:	April 2021					
Acute Toxicity Evaluation					Permit	Pass
Species		Exposure	LC-50	A-NOEC	Limit (LC-50)	Yes/No
<i>Americamysis bahia</i>		48 Hour	>100%	NC	≥100%	Yes
<i>Menidia beryllina</i>		48 Hour	>100%	NC	≥100%	Yes
Chronic Toxicity Evaluation					Permit Limit	Pass
Species		Exposure	C-NOEC	IC-25	(C-NOEC)	Yes/No
<i>Menidia beryllina</i>		7 Days	100%	NC	Report	NA
<i>Arbacia punctulata</i>		60 Minutes	100%	>100%	Report	NA
Study Number	35167					
Sample Date:	June 2021					
Acute Toxicity Evaluation					Permit	Pass
Species		Exposure	LC-50	A-NOEC	Limit (LC-50)	Yes/No
<i>Americamysis bahia</i>		48 Hour	>100%	NC	≥100%	Yes
<i>Menidia beryllina</i>		48 Hour	>100%	NC	≥100%	Yes
Chronic Toxicity Evaluation					Permit Limit	Pass
Species		Exposure	C-NOEC	IC-25	(C-NOEC)	Yes/No
<i>Menidia beryllina</i>		7 Days	100%	>100%	Report	NA
<i>Arbacia punctulata</i>		60 Minutes	100%	>100%	Report	NA

Study Number	35282					
Sample Date:	August 2021					
Acute Toxicity Evaluation					Permit	Pass
Species		Exposure	LC-50	A-NOEC	Limit (LC-50)	Yes/No
<i>Americamysis bahia</i>		48 Hour	>100%	NC	≥100%	Yes
<i>Menidia beryllina</i>		48 Hour	>100%	NC	≥100%	Yes
Chronic Toxicity Evaluation					Permit Limit	Pass
Species		Exposure	C-NOEC	IC-25	(C-NOEC)	Yes/No
<i>Menidia beryllina</i>		7 Days	100%	NC	Report	NA
<i>Arbacia punctulata</i>		60 Minutes	100%	>100%	Report	NA
NA = Not Applicable						
NC = Not Calculated						

ATTACHMENT B

**EPA Region 1 Annual Pretreatment Report Summary Sheet
(2021)**

POTW Name:	<i>South Essex Sewerage District</i>
NPDES Permit #:	<i>MA0100501</i>
Pretreatment Report Period Start Date:	<i>January 1, 2021</i>
Pretreatment Report Period End Date:	<i>December 31, 2021</i>
# of Significant Industrial Users (SIUs):	<i>21</i>
# of SIUs Without Control Mechanisms:	<i>0</i>
# of SIUs not inspected:	<i>0</i>
# of SIU's not sampled:	<i>0</i>
# of SIUs in Significant Noncompliance (SNC) with Pretreatment Standards:	<i>3</i>
# of SIUs in SNC with Reporting Requirements:	<i>0</i>
# of SIUs in SNC with Pretreatment Compliance Schedule:	<i>0</i>
# of SIUs in SNC Published in Newspaper:	<i>3</i>
# of SIUs with Compliance Schedules:	<i>0</i>
# of Violation Notices Issued to SIUs:	<i>20</i>
# of Administrative Orders Issued to SIUs:	<i>0</i>
# of Civil Suits Filed against SIUs:	<i>0</i>
# of Criminal Suits Filed Against SIUs:	<i>0</i>
# of Categorical Industrial Users (CIUs):	<i>14</i>
# of CIUs in SNC:	<i>3</i>

Penalties

Total Dollar Amount of Penalties Collected: *\$0*

of IUs from which Penalties have been collected: 0

Local Limits

Date of Most Recent Technical
Evaluation of Local Limits:

November, 2003

Date of Most Recent Adoption of
Technically Based Local Limits:

January, 2005

Pollutants	Technically Based Local Limits (mg/L)			MAHLs (lbs/day)
	Non-contributory	Contributory	Categorical	
As				5.64
Cd	0.02	0.36	0.11 – 0.69	1.88
Cr	0.25	4	2.27 – 19	50.1
Cu	0.4	2.7	2.77 – 3.38	48.2
CN				14.9
Pb	0.4	0.4	0.57 – 0.69	22.9
Hg				
Ni	0.1	2.5	3.26 – 3.98	20.3
Ag				20.6
Zn	2.6	2.6	2.14 – 2.61	165
BOD	**	**	**	46,100
TSS	**	**	**	47,400
FOG	300	300	300	

** Mass based limits that vary with the size of the discharge; the concentration limit is >2,400 mg/L and “X” lbs per day and “Y” annual pound limit.